Trucks and suspension systems: Decisions pushing theory?

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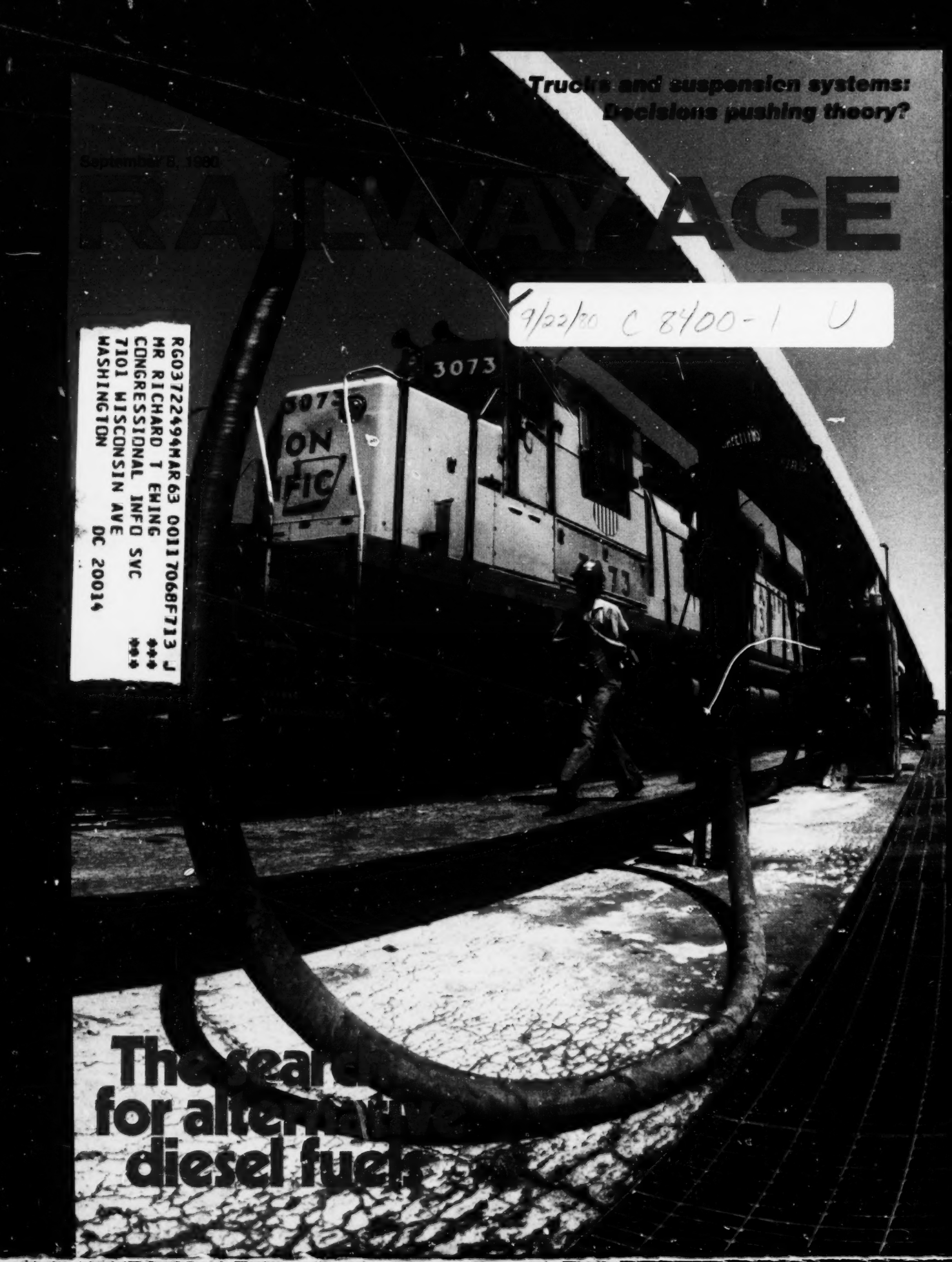

The search for alternative diesel fuels

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Inside

LUTHER S. MILLER

THE RITES OF AUTUMN

Following ancient custom, many mechanical and engineering department officers will celebrate the autumnal equinox in Chicago—though celebration may hardly be the word for the deliberations that will soon get under way at the Hyatt Regency (where the B&B and Roadmasters associations will meet Sept. 15-17) and at the Conrad Hilton (where the Coordinated Mechanical Associations get together Sept. 21-24). Matching skimpy budgets to soaring needs is a balancing act calling for acrobatic skills that are not taught in engineering schools.

Railway Age is devoting much of its first September issue to subjects deemed to be of particular interest to the convention-goers. Like the Chicago meetings themselves (if past experience is any guide), our articles will be seen to produce as many questions as answers.

FUEL...TRUCKS...AND TRACKS

One question uppermost in the minds of all railroad people today is what to do about (1) the soaring cost of "pure" diesel fuel and (2) the probability that at the turn of an OPEC screw the stuff may again become scarce at any price. That question is addressed by Senior Editor Gus Welty in the most comprehensive article yet published on a little-known but enormously important program now getting into full swing at the Southwest Research Institute in San Antonio, Tex. Gus's report—"The search for alternative fuels"—begins on p. 53.

Associate Editor John Armstrong, meanwhile, takes a new look at a question he first pondered in an article we published nearly two years ago. That article was entitled, "The radials are coming—or are they?" Although there has been substantial progress in research and development since that time, the question remains unanswered, as John points out in the article beginning on p. 30. His current report—eighth in our 1980 series of articles on railroad technology—goes far beyond the radials; it covers the whole complex field of trucks and suspension systems. John is duly (but not unduly) impressed by the radical and near-radical truck designs now in various stages of R&D. A main goal is attacking the phenomenon of truck hunting, which John describes as "something like gout—a prestige disease, popularly if not scientifically associated with the wherewithal for a gourmet lifestyle—in its association with railroads where track conditions are good enough for high speeds." But while hunting is "the darling of the analysts," he makes the important point that "the big end of the stick is and will remain the standard three-piece, four-wheel freight car truck....You buy 'em buy the pound, it takes a few minutes to learn how they come apart or go back together, and their faults and limitations are well known."

A writer who *has* come up with answers is Merwin Dick, former engineering editor of *Railway Age* and editor in chief of our companion magazine, *Railway Track & Structures*. With this issue, Merwin returns to our masthead as a consulting editor—and to mark the occasion, he has provided us with a report on the fast-spreading use of geotextiles. For railroads plagued by wet and unstable roadbeds, these fabrics—now available in a bewildering variety—are turning out to be something akin to a magic carpet (p. 70).

In another engineering story, Associate Editor Frank Malone describes how CN Rail is attacking the problem of matching dollars with demands by wringing more productivity out of its track expenditures (p. 65).

Market

CARLOADINGS

Loadings of revenue freight in the week ended Aug. 16 totaled 428,943 cars, according to the Association of American Railroads. This was a decrease of 49,281 cars, or 10.3%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended Aug. 16 are estimated at 17.5 billion, a decrease of 5.6% below the corresponding week of 1979.

REVENUE FREIGHT CARLOADINGS

Commodity	Aug. 16 week	Aug. 9 week
Grain	31,462	34,165
Farm products	4,131	4,033
Metallic ores	27,363	28,306
Coal	117,130	117,227
Crushed stone, gravel & sand	13,553	14,686
Nonmetallic minerals	16,601	15,589
Grain mill products	16,667	16,576
Food and kindred products	18,299	17,796
Primary forest products	19,547	19,817
Lumber & wood products (except furniture)	8,936	8,820
Pulp, paper & allied products	19,568	19,639
Chemicals & allied products	25,008	25,091
Petroleum products	5,404	5,269
Stone, clay & glass products	16,230	15,508
Coke	3,923	3,754
Metals & products	12,770	12,893
Motor vehicles & equipment	11,434	10,236
Waste & scrap materials	10,741	9,975
Forwarder & shipping assn. traffic	10,458	10,256
All other carloads	39,345	39,082
LCL traffic	373	207
Total cars loaded	**428,943**	**428,125**
Cumulative total	1980	1979
33 weeks	**14,315,559**	**15,054,766**
Estimated revenue ton-miles (billions, 33 weeks	579.9	568.4

PIGGYBACK LOADINGS

U.S. Piggyback loadings for the week ended Aug. 9 totaled 30,836 cars (11.6% below the corresonding 1979 week) and 56,571 trailers or containers (down 8.2% from 1979). Cumulative volume for the first 32 weeks of 1980 is 1,024,229 (down 10.4% from 1979) and 1,866,121 trailers or containers (down 7.6% from 1979).

CANADIAN CARLOADINGS

Canadian railway revenue freight loaded in the seven-day period ended July 14 totaled 6.1 million tons (up 16.1% from 1979). Cars loaded totaled 82,775 (up 5.4% from 1979). Cumulative loadings for 1980 were up to 142.4 million tons (up 5.8% from 1979).

• *CN Rail.*—Ordered 20 HR616 3,200-hp diesel-electric units from the Rail and Diesel Products Division of Bombardier Inc. at a cost of approximately $20 million. Production of the HR616 locomotives will follow that of 10 HR412 models previously ordered by CN Rail.

• *Family Lines.*—Will build a new $4-million car repair and diesel servicing facility at Winston Yard near Lakeland, Fla. The new facility will consolidate car repairs now made at Mulberry, Lakeland, and Winston. Locomotive servicing now performed at Lakeland will be moved to Winston. Car repairs will be performed in a 160×130-foot structure spanning four tracks. Each track will be equipped with hydraulic floor jacks, cranes, and support equipment and supplies. The locomotive facility will include an inspection track with a pit and with sanding, fueling, and watering equipment. An adjacent track will be built for light locomotive repairs and to assemble locomotives for outbound train movements.

• *New Jersey DOT.*—Awarded a $12.16-million contract to Transcontrol, a subsidiary of Siemens, for the supply and installation of signal equipment for Conrail's New York & Long Branch commuter line. Prime contractors for the project are Daidone Electric Inc. and Schiavone Construction Corp.

• *Norfolk & Western.*—Awarded a $2.5-million contract to WABCO's Union Switch & Signal Division for design, manufacture, and installation of equipment to upgrade Bellevue Yard at Bellevue, Ohio. Bellevue was among the first class yards to be computerized in the mid-60s. Retrofit will involve a new US&S dual computer control system and hardware including wheel detectors, radar, and microprocessor-based distance-to-ground equipment. The program is to be completed during 1981. NW has also awarded a $4.15-million contract to Rudolph/Libbe/Inc. of Walbridge, Ohio, for construction of a new locomotive inspection and repair facility at Bellevue, and a $1.16-million contract to Branch & Associates, Inc., for construction of a new covered hopper car cleanout facility at Shaffers Crossing, Roanoke, Va.

• *Soo Line.*—Directors approved an $11.6-million increase in 1981 new equipment programs, for 245 additional cars: 200 100-ton covered hopper cars for grain and potash, 25 100-ton covered gondolas for steel, and 20 100-ton ballast cars, all from builders yet to be named. Additions will raise value of 1981 equipment acquisitions to $18.7 million. Additional covered hoppers will raise the total for that car type to 4,200, or more than one-third of Soo's entire freight car fleet.